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Nuptiality in Thailand: a cross-sectional analysis of the 1970 Census

Aphichat Chamratrithirong

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PREFACE

This research project was made possible by a grant from the Southeast Asia Population Research Awards Program (SEAPRAP), International Development Research Center, Asian Regional Office, Singapore. I wish to express my appreciation to the staff of the Office and particularly to Dr. Pedro V. Flores, former project coordinator, and Dr. Wilfredo F. Arce, current program coordinator.

The National Statistical Office of Thailand supplied the data on which this study was based. Special thanks are due to Mrs. Anuri Wanglee, deputy secretary-general of the National Statistical Office, and to Mrs. Samruay Chotechanapibal, Mrs. Supani Boonpratuang, and Mr. Pichai Saisombat for their useful advice and data processing assistance.

Thanks are also due to Drs. Peter C. Smith, Robert Retherford, Sidney Goldstein, and Fred Arnold for their advice and comments on the paper. I am highly indebted to Dr. John Knodel for his review of an earlier draft. To Miss Orapen Buravisit, research assistant to the project, whose untiring help made the study possible, I owe my gratitude. Finally, my deepest appreciation is due to researchers at the East-West Population Institute and to Sandra Ward and Gregory Chu, also of EWPI, for their constructive comments and considerable editorial assistance.

ABSTRACT Comparison of data from the 1970 Population and Housing Census of Thailand with adjusted data from the 1960 Census reveals a slight increase in age at marriage for both sexes. Thai nuptiality appears to be in a transitional phase, moving toward a more modern pattern characterized by later marriage and a substantial proportion of the population remaining single. Cross-sectional analysis of the 1970 Census data indicates that the marriage pattern is responding to social changes associated with economic growth. Although marriage is still nearly universal in Thailand, delayed marriage is especially noticeable in Greater Bangkok and the relatively developed Central Region.

Using data from the 2 percent sample of the 1970 Census, the study correlates differentials in age at marriage and proportions single at younger and older ages with such socioeconomic and demographic characteristics as education, labor force participation, occupation, religion, citizenship (Thai or Chinese), household status, and migration status. As expected, delayed marriage and proportions single are found to be positively associated with educational attainment, female labor force participation, and occupational status. Age at marriage among women in 1970 was four to five years later for administrative, professional, and clerical workers than for agricultural workers, and women in these higher-status occupations tended more than others to remain single. Marriage occurred earlier and was more prevalent among Muslims than among Buddhists (the predominant religious group) and Christians. But the effect of religion on marriage interacted with the effect of education, especially at higher educational levels. Similarly, Chinese men and women married later than Thais; when citizenship and educational attainment were controlled, however, the effect of education outweighed that of citizenship among women (but not men). Internal migrants and specifically migrants to Greater Bangkok tended to have married earlier than nonmigrants, but factors other than migration alone may have been responsible for the difference.

The study found marriage dissolution through divorce, separation, and widowhood to be inversely related to fertility and also to urban residence, educational attainment, and occupational status. The number of children ever born and children under age five was lowest among divorced women and highest among women whose marriages were intact. The strong positive association between delayed marriage and socioeconomic status suggests that national policy aimed at improving

the status of women might be more effective in delaying marriage than legal measures to prohibit early marriage. Such a policy would be beneficial not only in encouraging fertility reduction but also in promoting marital stability.

The problem of rapid population growth in Thailand, which has resulted from a sharp decline in mortality in recent decades, is a major concern of policy-makers and social scientists. The role of nuptiality in population growth is gaining the attention of demographers because delayed marriage has been one of the main responses to national economic development and a major cause of Thailand's recent fertility decline. The study of delayed marriage will provide not only insight into the process of fertility reduction, but also useful information for policy development in the areas of education, labor force, and family planning. Changes in nuptiality policy, such as raising the minimum legal age at marriage, would be premature without a better understanding of the association between socioeconomic development and nuptiality. This paper attempts to shed light on that association.

Davis and Blake (1956) have suggested that marriage is one of the social "intermediate variables" that intervene between natural and controlled fertility. In particular, nuptiality governs most of the "intercourse variables," including age at entry into sexual union and celibacy owing to divorce, separation, and widowhood.

Socioeconomic factors affecting marriage patterns have also become a focus of interest (Yaukey, 1973). A cross-sectional study by Dixon (1971) has revealed that the distinction made by Hajnal (1965) between the traditional marriage pattern (characterized by young and universal marriage) and the European marriage pattern (characterized by later marriage and a high level of celibacy) still holds, especially for female populations. Since World War II, however, there has been a pronounced trend toward earlier and more universal marriage in most Western countries and toward later marriage in many parts of the Middle East and Asia (Dixon, 1971:230). Smith (1976) has also discerned a recent trend toward delayed marriage in Asia.

The socioeconomic explanation for this narrowing gap is that in the West, especially in the most wealthy nations of the West where the economies have been most secure, former financial constraints on early marriage have vanished. But in some developing countries where early socioeconomic development is proceeding, constraints on marriage

have begun to appear as a result of land shortages, underemployment in rural areas, and crowding and unemployment in cities. Moreover, early marriage among the highly educated is becoming less desirable "as they are freed from the contractualism of formerly arranged marriages without yet succumbing to the romanticism of the West" (Dixon, 1971:230).

Corresponding to these theoretical considerations, previous studies in Thailand have shown that mean age at marriage has tended to be highest in urban and nonagricultural areas, and especially in Greater Bangkok (Goldstein, 1971; Prachuabmoh et al., 1972; Knodel and Prachuabmoh, 1973). Recent analysis of the World Fertility Survey (WFS) data in Thailand reveals further that there has been a gradual rise in female age at marriage in the recent past (Institute of Population Studies and National Statistical Office, Thailand, 1977). Moreover, among currently married women, marriage age is closely related to education (Institute of Population Studies, 1971), rural or urban residence during childhood, family income, work status before first marriage, and occupation of husband (Institute of Population Studies and National Statistical Office, 1977).

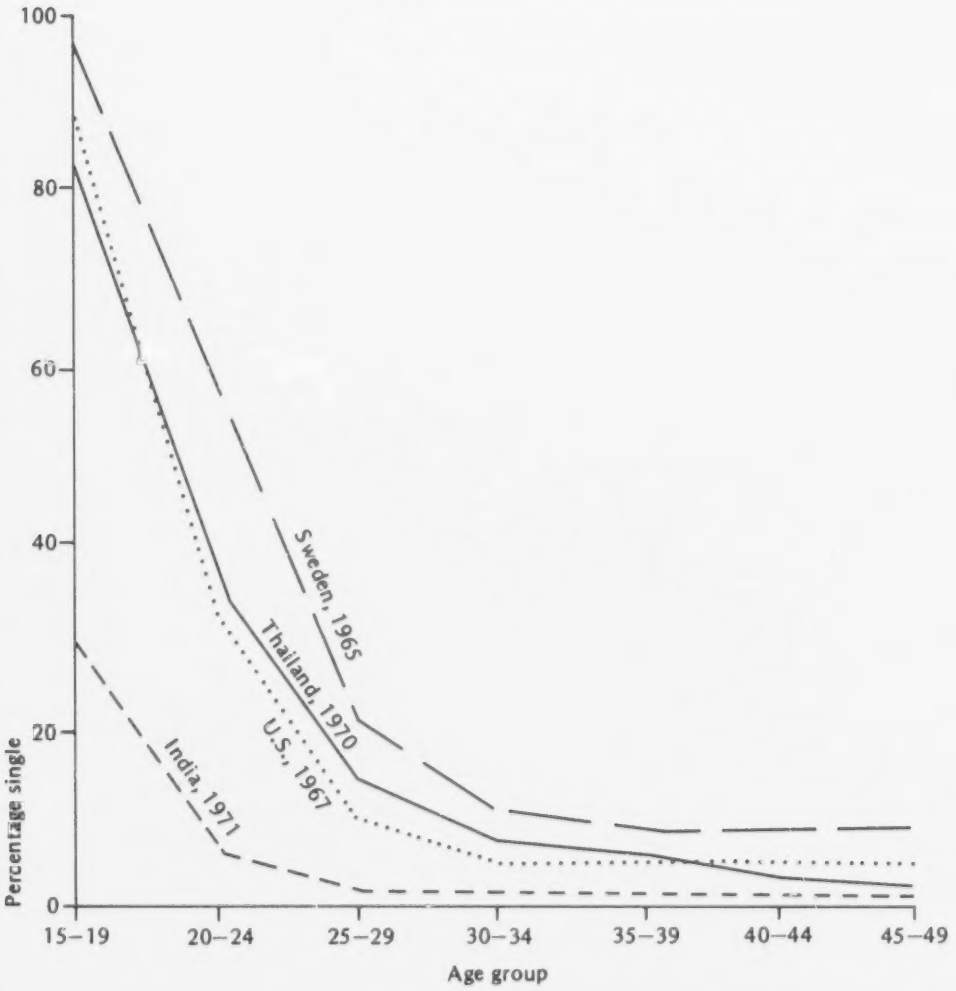
To supplement these findings, this paper presents an analysis of data from the 1970 Population and Housing Census of Thailand. The data include both the *changwad* (province) and regional series and the 2 percent sample of the Census. The former are studied by means of the cross-provincial approach, which is also used to examine level of development and the sex ratio at the aggregate level. Using the 2 percent sample data, I investigate socioeconomic differentials in nuptiality and fertility among ever married women of different current marital statuses.

THE THAI MARRIAGE PATTERN

1970 Census data on the percentage of women single by age reveal an unusual nuptiality pattern in Thailand. Compared with percentages single in two developed countries, Sweden and the United States, and in India (Figure 1), the Thai marriage pattern was more similar to that of the United States than to either the "traditional" pattern represented by India or the "European" pattern of Sweden. The percentage single was even higher in Thailand than in the United States for the ages around 21 to 36.

Another unusual feature of the Thai nuptiality pattern can be seen in the dynamic aspects of the nuptiality "transition" from early to later marriage (Figure 1). Although the percentages single at young

FIGURE 1 Percentage of women single by age: India, Sweden, Thailand, and the United States, recent years



Sources: United Nations Statistical Office (1976) and National Statistical Office (1973).

ages suggest a moderate age at marriage for Thai women, the small proportion single (2.2 percent) at ages 50 to 54 indicates that marriage has been virtually universal. This contrast between moderately delayed marriage among younger women and universality of marriage among older women may reflect a transitional phase of Thai nuptiality. If the marriage pattern has remained constant or changed only slightly

in the last 35 years, the cross-sectional data can be interpreted to suggest that Thai women have responded to modernization by postponing marriage, but not by foregoing marriage. It is more likely, however, that these data indicate an actual moderate change in female marriage behavior over the 35 years preceding the 1970 Census. The percentages single at younger age groups may represent a more recent and modern type of nuptiality, whereas those at the older age groups represent the traditional pattern of the earlier period. This hypothesis needs to be tested by longitudinal comparisons. An investigation of nuptiality patterns, based on 1960 and 1970 Census data, may provide insight into the change in marriage behavior over time.

Data from 50 countries on men and women never married around 1970 are cited here to demonstrate the point that Thailand has had an intermediate nuptiality pattern at the younger ages (Table 1). The proportions of single men and women at ages 20–24 in Thailand in 1970 were about 64 and 38 percent respectively. The percentage of women

TABLE 1 Percentage of men and women never married at ages 20–24 and 40–44: 50 countries, around 1970

Region, country, and census year	Percentage never married			
	Ages 20–24		Ages 40–44	
	Males	Females	Males	Females
EAST ASIA				
Thailand				
1960	**68.2**	**38.6**	**3.0**	**3.1**
(1960)[a]	**(64.0)**	**(36.2)**	**(2.9)**	**(3.1)**
1970	**63.8**	**37.9**	**3.1**	**3.9**
Hong Kong, 1971	92.1	67.6	11.3	2.9
India, 1971	50.2	9.0	3.5	0.6
Japan, 1975	88.0	68.8	3.7	4.9
Republic of Korea, 1970	92.6	57.9	0.4	0.2
Malaysia, 1970	73.4	41.4	4.2	2.2
Pakistan, 1968	66.6	18.0	5.2	1.8
Philippines, 1970	69.2	50.2	4.8	7.3
Ryukyu Islands, 1970	84.3	69.2	4.6	3.5
Singapore, 1970	88.5	64.6	7.2	3.3
Unweighted mean[b]	69.1	42.5	4.7	2.8
MIDDLE EAST (9 countries[c])				
Unweighted mean	66.1	27.6	3.9	2.3

TABLE 1 *(continued)*

Region, country, and census year	Percentage never married			
	Ages 20–24		Ages 40–44	
	Males	Females	Males	Females
EASTERN EUROPE (7 countries[d])				
Unweighted mean	70.7	36.0	3.7	4.2
WESTERN EUROPE (20 countries[e])				
Unweighted mean	75.4	54.2	12.8	11.5
ENGLISH-SPEAKING COUNTRIES				
Australia, 1971	63.9	35.7	10.0	4.8
Canada, 1971	67.6	43.5	9.4	6.9
New Zealand, 1966	68.2	38.9	9.9	6.2
United States, 1970	55.5	36.3	7.5	5.4
ALL COUNTRIES				
Unweighted mean (M)	72.0	44.0	7.9	6.1

a For half of the population in each age group, age has been adjusted downward by six months from age reported to compensate for a tendency among some Thais to state age at next, rather than last, birthday.

b Excluding percentages for Thailand.

c Including Algeria (1966), Cyprus (1973), Iran (1971), Iraq (1970), Israel (1972), Jordan (1970), Morocco (1971), Tunisia (1971), and Turkey (1970).

d Including Bulgaria (1965), Czechoslovakia (1970), Greece (1971), Hungary (1970), Poland (1972), Romania (1966), and Yugoslavia (1971).

e Including Austria (1970), Belgium (1970), Denmark (1970), England and Wales (1970), Finland (1970), France (1970), Federal Republic of Germany (1970), Iceland (1969), Ireland (1971), Italy (1971), Luxembourg (1970), Malta (1967), Netherlands (1970), Northern Ireland (1966), Norway (1970), Portugal (1970), Scotland (1970), Spain (1970), Sweden (1970), and Switzerland (1970).

SOURCES: United Nations Statistical Office (1976), National Economic Development Board (1961), and National Statistical Office (1973).

single in this young age group was higher in Thailand than in India, Pakistan, Australia, or the United States, and also higher than the average for countries of the Middle East and Eastern Europe. On the other hand, the percentage of women single in the 20–24 age group was much higher in Hong Kong, Japan, the Ryukyu Islands, Singapore, and Western Europe than in Thailand. The percentage of men single at ages 20–24 was lower than in most of the other countries except India and the United States. Thai nuptiality at these younger ages, therefore, may be characterized as lying between the traditional and the European pattern, especially for women.

Thai data on proportions single at the older ages of 40–44, in contrast, indicate traditional nuptiality behavior, especially among men. In this age group, the percentage of men never married in 1970 was among the lowest of all the countries. For women the figure was lower than comparable proportions for the English-speaking countries, Eastern and Western Europe, Japan, and the Philippines, although it was higher than the proportions still single elsewhere in Asia and in the Middle East.

Of the two patterns of nuptiality—one characterized by universal nuptiality but delayed marriage at young ages (as in Japan and the Ryukyu Islands), the other characterized by a high rate of celibacy but young marriage (as in the United States)—Thailand's marriage pattern seems to resemble the former. Although there has been some delay in marriage at the young ages, especially among women, eventual marriage is nearly universal. That the Thai pattern does not conform exactly to either model may indicate, as I have already suggested, that Thailand is in a transitional phase of nuptiality behavior.

Table 2 presents recent data on singulate mean age at marriage in Asia for men and women. Singulate mean age at marriage (SMAM) is a summary measure of the timing of first marriage based upon one cross-sectional schedule of proportions single by age group. (For details, see Smith, 1978.) If one takes Asian nuptiality around 1970 as the standard, the SMAM for men in Thailand (24.7) may be considered below average. The highest SMAM for men was found in Hong Kong (30.2); the lowest, in Indonesia (23.6). As already noted, however, female age at marriage in Thailand in 1970 was intermediate, compared with that in other countries. Whereas the lowest age at marriage was reported for Bangladesh (14.8) and the highest for Macau (25.6), the SMAM for Thai women was 21.9.

CHANGES IN PROPORTIONS SINGLE

To test the hypothesis that Thailand is undergoing a transition toward a more modern nuptiality pattern, it is useful to compare the 1960 and 1970 Censuses of Thailand. But the two censuses are not entirely comparable in age reporting. In 1960, enumerators asked respondents to state their age. As reported by Chamratrithirong et al. (1978), there is substantial evidence of a tendency for Thais to state age at next birthday in preference to age at last birthday; and there is some evidence of a tendency to round age to that at the nearest birthday. Although the extent to which the practice of reporting age at next birthday occurs has not yet been determined, it appears to be fairly prevalent.

TABLE 2 Singulate mean age at marriage, by sex: countries of Asia, recent data

Region, country, and year	Male	Female	M − F
SOUTH ASIA			
Bangladesh, 1965	u	14.8	u
India, 1971	24.7	17.1	7.6
Nepal, 1971	u	16.6	u
Pakistan, 1971	u	19.2	u
Sri Lanka, 1971	28.0	24.1	3.9
SOUTHEAST ASIA			
Thailand, 1970	**24.7**	**21.9**	**2.8**
Brunei, 1960	25.7	19.5	6.2
Burma, 1953	u	19.3	u
Cambodia, 1962	24.3	21.3	3.0
Indonesia, 1971	23.6	19.0	4.6
Malaysia, 1970	25.6	22.1	3.5
Philippines, 1970	u	22.9	u
Singapore, 1970	u	24.4	u
EAST ASIA			
Hong Kong, 1971	30.2	23.8	6.4
Japan, 1970	27.6	24.7	2.9
Republic of Korea, 1970	27.2	23.3	3.9
Macau, 1970	29.0	25.6	3.4
Ryukyu Islands, 1965	27.9	25.5	2.4
Taiwan, 1974	24.7	23.1	1.6

u—unavailable.

SOURCE: Smith (1976: Appendix Table 1, 1978), except for Malaysia, where SMAMs were calculated from data on West Malaysia, Sabah, and Sarawak.

In the absence of more definitive evidence, adjustments of age data to allow for this tendency assume that in stating age directly, half of the respondents rounded age up to the next birthday and half reported age at last birthday. Persons who stated age directly (rather than by reporting date of birth) were, according to the assumption, reported as being on average about half a year older than if their age had been computed from the birth date. In the 1970 Census, on the other hand, age was calculated from the year of birth. It then referred to the age at last birthday. To solve the problem of incompatibility in

age reporting, I have adjusted the 1960 percentages single by reducing the ages of half of the population in each age group by six months.

Table 3 and Figure 2 present percentages single by age and sex for 1960 (adjusted and unadjusted figures), 1970, and 1975. The unadjusted figures indicate that the percentages single were higher in 1960 than in 1970 among the younger age groups, but among older age groups the 1970 percentages were generally higher. Rather than reflecting a trend toward delayed marriage in the earlier decade, the unadjusted 1960 figures suggest a bias in age reporting among younger age groups, where marital statistics are most sensitive to age.

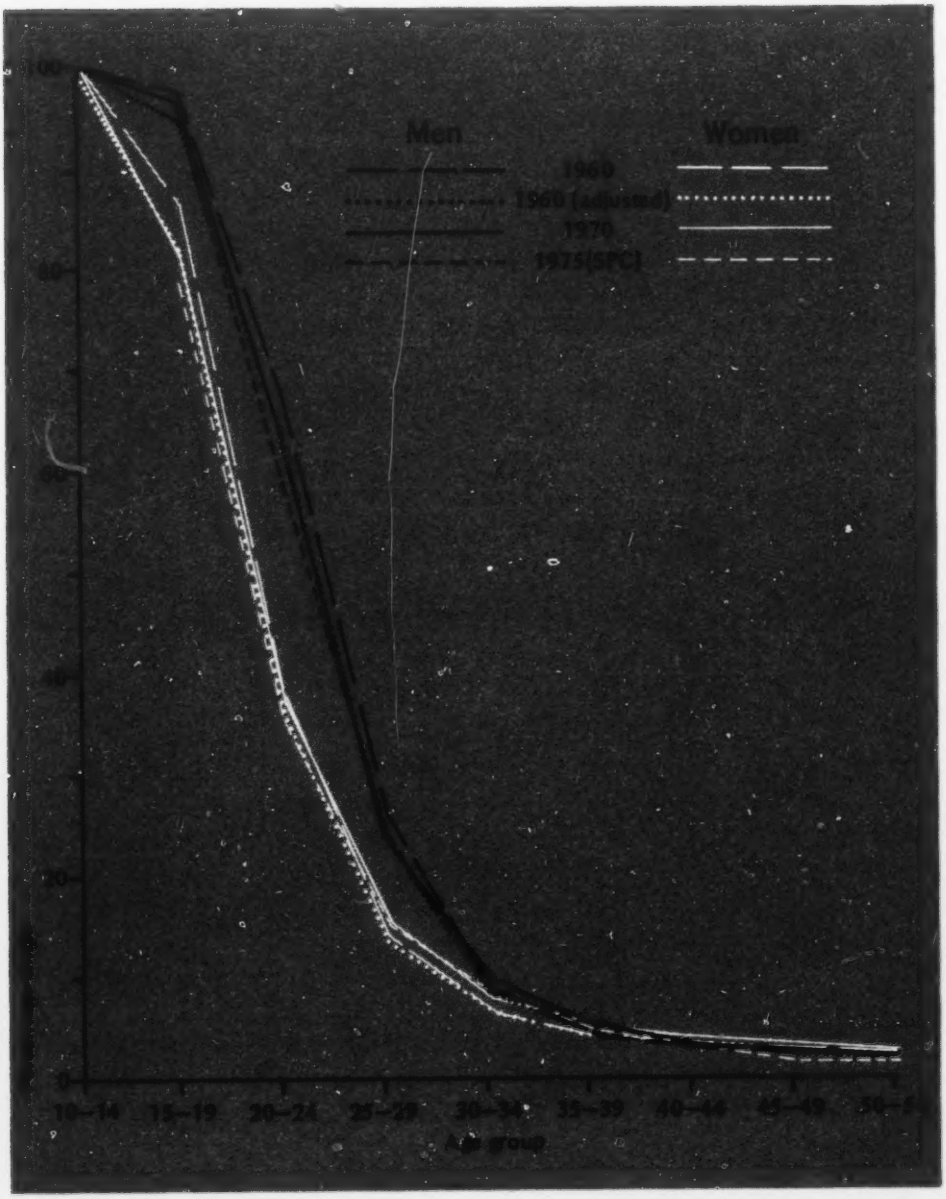
Looking first at the unadjusted data, we see that percentages single for ages 15–19 to 25–29 were lower in 1970 than in 1960 for both sexes except females aged 25–29. The gap is considerably greater for females aged 15–19 (86 percent in 1960 compared with 81 percent in 1970) and for males aged 20–24 (68 and 64 percent respectively) because the slope of decline in percentages single is especially sharp at these age groups for both females and males. At ages 30 and over, however, where the slope starts to level off and the bias in age reporting affects the likelihood of marriage only slightly, a reversed and probably more realistic trend in nuptiality is seen: the figures in 1970 were higher for every age group and for both sexes. The figures for the older age groups, which are not sensitive to age-reporting bias, suggest an actual increase in proportions single between the two census periods.

Correction of the bias almost totally eliminates the large difference between the two censuses at age groups 15–19 for females and 20–24 for males. Except for those two groups and for males aged 25–29, for which the percentages single were slightly higher in 1960, the figures reveal a uniform pattern of increasing delayed marriage during the period 1960–70.

Table 3 also presents data on percentages single in 1975 from the Survey of Population Change (SPC) and the WFS Survey of Fertility in Thailand (SOFT). Comparison of data from the 1970 Census and SOFT reveals, again, an increase in percentages single for almost all age groups of both sexes. This is especially true for younger women (ages 15–29). Comparison of data for the three years–1960 (adjusted figures), 1970, and 1975 (SOFT)–suggests that the increase in proportions of single young women accelerated in the latter period.

The SPC data provide contrasting evidence, however, suggesting that proportions single decreased in certain age groups, especially among younger women, in the five-year period. There is no conclusive explanation for the inconsistency between the two sets of survey data,

FIGURE 2 Percentage of men and women single by age: Thailand, 1960 (unadjusted and adjusted data), 1970, and 1975



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but I suspect that the migration of young men and women may have distorted the SPC data and that the trend toward later marriage indicated by the SOFT data is more realistic. Unpublished tables from the SPC (personal communication with Chintana Pejaranonda) show that in-, out-, and net out-migration during the survey period (1974–76) was substantial at ages 15–24 and that migrants were predominantly single. Therefore, there may have been an underenumeration of these young and single migrants in the SPC owing to the failure of the survey to account for all "temporarily away" residents. Yet, by definition, temporary visitors in the destination were excluded from the tabulations. Data from SOFT, on the other hand, are based on the de facto population (those who slept in the household the night before the interviews). Those who had moved away were statistically enumerated in the receiving areas. If my inference that the SOFT data, although based on a smaller sample,[1] are more likely to be representative of the younger population, the trend toward delayed marriage begun in the 1960s would appear to have continued, or even to have accelerated in the case of young women, in the 1970–75 period. The cross-sectional analysis that follows attempts to shed light on the socioeconomic and modernizing influences on nuptiality and, consequently, on the implications of the apparent trend toward later marriage in Thailand.

RURAL-URBAN AND REGIONAL VARIATION IN PROPORTIONS SINGLE

As shown in Table 4, only about 2 percent of the rural population and 4 percent of the urban population of both sexes had not married by ages 50–54 in 1970. Percentages currently single among all age groups, standardized by age on the basis of the population of the Whole Kingdom, confirms this pattern. The nuptiality pattern in the rural areas may therefore be characterized by so-called universal marriage. Although the percentage remaining single was slightly higher in urban areas, marriage there was still very nearly universal.

The data for the younger age groups reveal a lower age at marriage in rural than in urban areas, suggesting that urban-rural differentials were much greater in these age groups than at later ages. By ages 25–29, only 13 percent of the female population in rural areas were

1 The SOFT sample size was much smaller than that of the SPC and is consequently subject to a higher sample variability (personal communication with Fred Arnold).

TABLE 4 Percentage single by age and sex: urban and rural areas of Thailand, 1970

	Percentage single			
	Urban areas		Rural areas	
Age group	Male	Female	Male	Female
10–14	100.0	99.7	100.0	99.5
15–19	98.1	89.2	95.8	79.5
20–24	80.8	59.2	60.4	33.7
25–29	43.8	30.8	20.4	12.8
30–34	20.2	16.3	8.1	6.7
35–39	10.3	10.1	4.4	4.5
40–44	6.1	7.1	2.7	3.4
45–49	4.8	5.5	2.0	2.7
50–54	3.9	4.2	1.6	2.3
Total standardized by age	58.0	51.9	50.2	42.8

were still single, compared with 31 percent in urban areas. Similar differences are found in the male population.

Even larger variations in female nuptiality patterns are observed between Greater Bangkok and the four regions of the country (Table 5). In 1970 the percentages single in Greater Bangkok were considerably higher than in the rest of the country for every age group, and the differences were greatest at younger ages. Not surprisingly, the Central Region, which is the most urbanized, had the slowest tempo of marriage compression and the highest total percentage single.

A comparison of singulate mean age at marriage in 1960 (adjusted figures) and 1970 reveals a slight increase for both sexes throughout the Whole Kingdom (Table 6). The increase was substantial, however, only in Greater Bangkok and especially for women, whose age at marriage increased by one and a half years. The SMAM rose slightly in the Central, North, and South Regions but declined slightly in the poor Northeast. In both 1960 and 1970, regional differences in the SMAMs for both sexes were apparent. Greater Bangkok had a higher age at marriage than any other part of the country. Among the four regions, the most developed Central Region had the highest SMAM. In 1970, for which rural-urban data are also available, the SMAMs were generally higher in urban than in rural areas (Table 7). As for differences between the sexes, male SMAMs were about three years higher than fe-

TABLE 5 Percentage of women single by age: Greater Bangkok and the four regions of Thailand, 1970

Age group	Percentage single				
	Greater Bangkok	Central[a]	Northeast	North	South
10–14	99.7	99.6	99.6	99.5	99.2
15–19	90.1	84.2	80.2	78.2	74.2
20–24	62.1	44.8	31.0	31.4	33.9
25–29	32.6	19.5	11.6	11.1	13.0
30–34	17.3	10.5	6.1	5.4	6.0
35–39	10.5	7.1	4.3	3.7	3.6
40–44	7.5	5.1	3.3	3.0	2.3
45–49	5.7	4.0	2.6	2.5	1.5
50–54	4.4	3.3	2.3	2.1	1.0
Total standardized by age	52.8	46.7	42.4	41.9	41.5

a Excluding Greater Bangkok.

male in all regions and in both rural and urban areas. In general, a region's socioeconomic development was positively associated with its SMAMs. This relationship between socioeconomic status and singulate mean age at marriage is examined below at the provincial level.

TABLE 6 Singulate mean age at marriage by sex: urban and rural areas and the four regions of Thailand, 1960 and 1970

Area or region	Male		Female	
	1960[a]	1970	1960[a]	1970
Whole Kingdom	24.5	24.7	21.6	21.9
Urban areas	u	27.2	u	24.7
Rural areas	u	24.2	u	21.4
Greater Bangkok	26.7	27.5	23.4	25.0
Central[b]	24.9	25.5	22.2	22.7
Northeast	23.9	23.7	21.5	21.2
North	23.9	24.2	21.0	21.1
South	24.5	24.7	21.0	21.3

u—unavailable.

a Adjusted for age misreporting.

b Excluding Greater Bangkok.

TABLE 7 Percentage never married and singulate mean age at first marriage, by sex, region, and urban/rural area: Thailand, 1970

Region and area	Percentage never married				Singulate mean age at first marriage		
	Male		Female				
	20–24	40–44	20–24	40–44	Male	Female	M – F
WHOLE KINGDOM	62.9	2.9	38.0	3.9	24.7	21.9	2.8
Urban	81.9	6.6	59.5	7.5	27.3	24.8	2.5
Rural	59.3	2.4	33.9	3.4	24.2	21.4	2.8
GREATER BANGKOK	83.7	7.2	64.5	8.3	27.6	25.4	2.2
Urban	85.1	7.1	64.9	14.1	27.8	25.9	1.9
Rural	76.9	7.7	62.8	7.4	26.8	24.8	2.0
CENTRAL[a]	68.4	3.0	44.9	5.0	25.2	22.4	2.8
Urban	75.2	7.0	52.6	7.9	26.5	23.8	2.7
Rural	67.6	2.5	44.0	4.7	25.1	22.2	2.9
NORTH	61.3	3.6	33.0	3.1	24.5	21.3	3.2
Urban	85.3	6.4	52.8	4.9	26.9	23.8	3.1
Rural	59.6	3.4	31.6	3.0	24.3	21.3	3.0
NORTHEAST	54.5	1.3	30.0	3.3	23.6	21.2	2.4
Urban	70.6	3.2	46.9	4.7	25.7	22.9	2.8
Rural	53.8	1.2	29.3	3.2	23.5	21.2	2.3
SOUTH	61.4	2.8	33.0	2.3	24.4	21.2	3.2
Urban	79.4	6.1	51.5	5.8	27.0	23.9	3.1
Rural	59.3	2.4	30.5	1.9	24.1	21.1	3.0

NOTE: In Thailand, localities are legally designated as urban or municipal on the basis of population size, density, revenue capabilities, and ability to perform certain governmental administrative functions (Goldstein et al., 1974).

a Excluding Greater Bangkok.

SOCIOECONOMIC CORRELATES OF AGE AT MARRIAGE

Correlation coefficients between the SMAM for the 69 *changwad* (provinces) in 1970 and an index of five socioeconomic (SES) variables are found to be high—.78 for men and .51 for women—and significant at the .001 level (Table 8). (See Chamratrithirong, 1976, for a discussion of the SES variables used.) These associations are also significant at the .001 level for all five of the SES variables, with the exception of

TABLE 3 Percentage single by age and sex: Thailand, 1960, 1960 adjusted, 1970, and 1975

Age group	Percentage single									
	Male					Female				
	1960	1960 (adjusted)[a]	1970	1975 (SPC)	1975 (SOFT)	1960	1960 (adjusted)[a]	1970	1975 (SPC)	1975 (SOFT)
10–14	99.8	99.6	100.0	u	u	99.9	98.5	99.5	u	u
15–19	97.4	94.5	96.2	95.6	96.9	86.2	81.5	81.0	78.6	84.7
20–24	68.2	64.0	63.8	59.6	63.9	38.7	36.2	37.9	35.9	41.4
25–29	25.8	24.1	24.0	24.5	25.9	14.1	13.4	15.6	15.7	19.2
30–34	8.9	8.5	9.9	8.9	8.1	6.7	6.5	8.1	8.2	10.1
35–39	4.6	4.4	5.2	5.2	5.9	4.2	4.1	5.3	4.8	6.3
40–44	3.0	2.9	3.1	3.3	2.8	3.1	3.1	3.9	3.2	3.8
45–49	2.4	2.3	2.3	2.2	2.4	2.6	2.6	3.0	1.6	3.3
50–54	2.1	2.1	1.9	2.1	1.8	2.3	2.3	2.5	1.6	3.8
Total	49.3	49.3	51.4	nc	nc	41.5	41.4	44.3	nc	nc

SPC–Survey of Population Change, 1974–76 (National Statistical Office, 1979).

SOFT–Survey of Fertility in Thailand (Institute of Population Studies and National Statistical Office, 1977).

u–unavailable.

nc–not calculable because of missing data for age group 10–14.

a Adjusted for age misreporting. (See footnote a, Table 1.)

TABLE 8 Pearson correlation coefficients between singulate mean age at marriage (SMAM) and socioeconomic characteristics: 69 provinces of Thailand, 1970

Socioeconomic characteristics	SMAM	
	Male	Female
Percentage urban[a]	.62*	.30†
Percentage in nonprimary industry[b]	.81*	.48*
Housing index[c]	.57*	.56*
Material possession scores[d]	.66*	.30†
Percentage with higher education[e]	.72*	.46*
SES index[f]	.78*	.51*

* $p < .001$.

† $p < .01$.

a Percentage of provincial population residing in urban areas.

b Percentage of population employed in secondary and tertiary industries.

c Total T scores ($T = 50 + 10\frac{x-\bar{x}}{S.D.}$) on percentage of population living in private homes with strong construction, modern water source, electric lighting, modern toilet facilities, and modern cooking fuel.

d Average scores on possession of modern household materials.

e Percentage of population 21 years of age and over who attained grade 5 and over.

f Socioeconomic status index consisting of total T scores on the five socioeconomic variables.

percentage urban and average material possession scores, which do not correlate with female nuptiality at any level higher than .01.

The positive relationship found here between marriage delay and socioeconomic opportunities is consistent with various theoretical explanations. It lends weight to the relative deprivation thesis of Davis (1963), which emphasizes that a nuptiality delay is one of the demographic responses to increases in opportunities rather than to poverty. Using price theory, one can formulate another hypothesis to explain the positive relationship. Although increased income may facilitate early marriage, in the course of economic growth the "price" of marriage, which also increases with new opportunities, probably tends to outweigh the effect of increased income. This price effect involves, among other things, the termination of formal education and female employment in favor of earlier marriage. In other words, the relative socioeconomic constraints on marriage increase with development. These are reflected in rising aspirations for owning a residence and for higher educational and occupational achievement before marriage. On

the whole, therefore, a positive relationship between nuptiality delay and increased opportunities is found here.

The socioeconomic correlation revealed by the Thai data is much more significant for men than for women (Table 8). This finding points to the importance of traditional sex roles in Thailand; the socioeconomic constraints, which increase in the course of modernization and development, are imposed more strongly on men. This is partly reflected in the Thai traditions such as the payment of *sin-sond* (money paid by the groom or his family at the time of marriage), *tong-mun* (money or gold given to the bride's family before the marriage), and the construction of *ruen-hor* (new house for the newlyweds built at the expense of the groom on the bride's land), whereas no specific prerequisites are traditionally imposed on women before marriage (Vanaputi, 1972). Furthermore, it is a Thai tradition that before marriage a man must spend a period of three months in the monkhood (Kaufman, 1960).

AVAILABILITY OF MATES

Among nonsocioeconomic factors that might influence regional marriage patterns, the sex ratio is of particular interest. Dixon (1971) has hypothesized that the nuptiality pattern can be predicted from three factors: availability of prospective mates, feasibility of marriage, and desirability of marriage. Availability is defined by several measures of the sex ratio at the marriageable ages. The masculinity ratio (ratio of marriageable men to marriageable women) represents the availability of husbands. According to Dixon's hypothesis, "masculinity ratios should be positively correlated with marital delays among men and with bachelorhood, and negatively correlated with marital delays among women and with spinsterhood" (p. 222).

Correlations between the masculinity ratio and the SMAM in 1970 for the 69 provinces of Thailand (Table 9) support Dixon's hypothesis. The masculinity ratio was negatively and significantly correlated with female SMAM, suggesting that female marriage behavior relied on the availability of male partners. As for men, the sex ratio was positively related to bachelorhood and male age at marriage, lending support to Dixon's hypothesis; but the strength of the relationship was not so significant.[2]

2 Defining the sex ratio as the ratio of males aged 20–24 to females aged 15–19, Smith (1980) has obtained correlations that are much weaker for each sex than those shown in Table 9 but with the same signs—i.e., .037 for males and −.054 for females.

TABLE 9 Pearson correlation coefficients between masculinity ratio and singulate mean age at marriage (SMAM), by socio-economic status (SES) of provinces: 69 provinces of Thailand, 1970

Sex and provincial SES	SMAM 1970
MALE	
All provinces (N=69)	.26††
Low SES provinces (N=20)	.34
Medium SES provinces (N=21)	−.05
High SES provinces (N=21)	.33
Very high SES provinces (N=7)	−.13
Partial correlation coefficients (N=69)	.13
FEMALE	
All provinces (N=69)	−.39*
Low SES provinces (N=20)	−.74*
Medium SES provinces (N=21)	−.55†
High SES provinces (N=21)	−.61†
Very high SES provinces (N=7)	−.82††
Partial correlation coefficients (N=69)	−.61†

* $p < .001$.
† $p < .005$.
†† $p < .05$.

In order to separate socioeconomic factors from the availability of mates, which together underly the variation in nuptiality patterns, Table 9 shows partial correlation coefficients between the masculinity ratio and age at marriage, with SES controlled for the 69 provinces, and correlation coefficients for each of the four SES groups of provinces. Both statistical procedures confirm that for men, the weak relationship between the availability of mates and age at marriage virtually disappears when SES is controlled. For women, in contrast, the effect of the masculinity ratio remains strong and negative.

The finding that male age at marriage has not depended on the availability of mates, as in the case of women, may be due to differences in sex roles in traditional Thai society. Women are more passive in mate selection and therefore depend on male initiatives. Men, on the other hand, are probably more active in the marriage market, and therefore their nuptiality behavior does not depend on the sheer num-

ber of mates available. (See Knodel and Maynes, 1976, for a similar finding about nineteenth-century Germany.) On the other hand, as we have seen in Table 8, the marriage behavior of men has been much more closely related to socioeconomic factors than that of women. These two findings suggest that male marriage behavior is more complicated and influenced by socioeconomic factors, and that female nuptiality, because it is less influenced by socioeconomic considerations, depends more heavily on the availability of mates.

SOCIOECONOMIC AND DEMOGRAPHIC DIFFERENTIALS IN MARRIAGE

Socioeconomic and demographic variables likely to be associated with marriage include education and literacy, labor force participation and type of economic activity, occupation, major industrial group of employment, work status, religion, citizenship, relationship to household head, and migration status. This section examines the relationship between these variables and singulate mean age at marriage, proportion ever married at young ages, and celibacy at older ages, for both men and women.

The relationship of socioeconomic and demographic characteristics of men and women studied here to marital status should be interpreted with care. Although religion and citizenship, and probably education (especially at lower levels), probably do not change over life, other characteristics such as occupation, economic activity, work status, relationship to head of household, and migration status can change continually. The difficulty is that we do not know from available data whether changes in status occurred when the men and women studied were still single or after they had married. Imputation of a causal association between these characteristics and marital status should be made cautiously. Any explanation should leave room for the possibility that when men or women change their marital status, they may change their socioeconomic and demographic status for that reason; in other words, marriage may be a determinant rather than a consequence of socioeconomic status. Several interpretations of each investigated relationship are therefore offered here, where appropriate.

Education

A positive effect of educational attainment and literacy on age at marriate has been found in many countries. Smith (1976:46) has reported a difference of approximately five years between age at marriage among Asian women with no schooling and those who attained a high

level of education. In the same study he indicated that the effect of education on age at marriage was greatest at the highest levels of attainment.

In Thailand in 1970, literate men and women had higher singulate mean ages at marriage than their illiterate counterparts (Table 10). Among women the difference was greater (22.1 compared with 20.0) than among men (24.7 compared with 24.3). The percentages never married at ages 20–24 for both sexes were also higher for the literate than for the illiterate groups.

Marriage age by educational attainment followed the same pattern. The singulate mean age at marriage and percentages never married at ages 20–24 rose substantially beyond the primary educational level for both men and women. Among men, age at marriage rose from 24.5 and 24.3 for those with no schooling and primary education respectively to 26.7 for those with secondary education and 29.5 for those who had graduated from a university. Among women, age at marriage rose from 20.2 to 21.7, 25.4, and 29.2 respectively across the four educational groups. Slightly fewer than one-third of female university graduates remained single at ages 40–44.

The difference of nine years in marriage age between women with no formal education and those who had a university degree is especially striking when compared with the average difference for Asia of five years. In contrast, the corresponding difference for Thai men was only five years. The gap between men and women in age at marriage was greater (4.3 years) for the group with no schooling than that (0.3 years) for university graduates. These findings suggest that educational attainment has affected female nuptiality more strongly than male (see Figure 3). Female celibacy, especially among university graduates, appears to be an important factor underlying the difference between male and female marriage patterns. It is also noteworthy that in Thailand, as in many other countries, the effect of education on age at marriage seems to be greatest beyond the primary level, which was the compulsory level at the time when this cohort of women was in school.

Labor force participation and type of economic activity

Changes in the nature of labor force participation, especially those related to nonfarm activity, are another aspect of social and economic development that is frequently found to be responsible for changes in demographic behavior. It is often assumed that, in modernizing societies, increased female participation in the labor force may lead to a

TABLE 10 Percentage never married and singulate mean age at first marriage, by sex and selected socioeconomic, cultural, and demographic characteristics: Thailand, 1970

Characteristics	Percentage never married				Singulate mean age at first marriage		
	Male		Female				
	20–24	40–44	20–24	40–44	Male	Female	M–F
EDUCATIONAL ATTAINMENT							
No schooling	55.9	5.4	27.2	3.9	24.5	20.2	4.3
Primary	60.0	2.2	35.3	3.5	24.3	21.7	2.6
Secondary	80.0	5.4	70.0	11.1	26.7	25.4	1.3
University	97.6	3.6	95.0	31.7	29.5	29.2	0.3
LITERACY							
Literate	63.4	2.5	39.4	4.0	24.7	22.1	2.6
Illiterate	54.5	6.0	25.4	3.8	24.3	20.0	4.3
ECONOMIC ACTIVITY							
Economically active	70.8	3.2	59.8	6.6	25.7	24.3	1.4
Employed	70.7	3.7	63.3	7.6	25.8	24.9	0.9
Looking for work	71.7	2.9	71.4	21.6	29.0	28.7	0.3
Experienced worker	46.1	0.0	25.3	33.2	23.8	19.1	4.7
New worker	81.3	9.5	83.1	8.1	30.4	30.7	-0.3
Waiting for farm season	70.9	1.7	52.3	4.7	25.2	23.2	2.0
Economically inactive	96.0	29.0	34.5	3.0	32.8	21.0	11.8
Housewife/homemaker	85.5	13.4	20.5	2.4	29.1	19.1	10.0
Student	94.0	0.0	99.5	0.0	u	u	u
Unable to work	100.0	29.2	(89.9)[a]	6.7	33.7	29.8	3.9
Other	83.4	21.4	77.6	35.0	31.4	31.3	0.1
OCCUPATION							
Professional, technical, and related workers	74.1	2.8	76.4	17.5	26.6	25.7	0.9
Administrative, executive, managerial workers, and government officials	86.0	2.8	73.1	27.3	27.1	26.4	0.7
Clerical and related workers	76.0	7.0	82.5	18.5	27.2	26.6	0.6
Sales workers	74.5	3.4	53.9	5.2	26.2	23.6	2.6
Agricultural workers	57.0	2.0	33.5	3.2	23.9	21.5	2.4

TABLE 10 *(continued)*

Characteristics	Percentage never married				Singulate mean age at first marriage		
	Male		Female				
	20–24	40–44	20–24	40–44	Male	Female	M–F
OCCUPATION *(continued)*							
Miners and quarry workers	89.5	4.5	72.0	1.7	u	u	u
Transport workers	57.9	3.7	78.5	11.6	23.9	23.7	0.2
Artisans and laborers	67.7	5.7	61.9	9.1	25.4	25.0	0.4
Service workers	74.7	3.3	72.8	7.0	25.7	26.6	-0.9
MAJOR INDUSTRIAL GROUP							
Agriculture, forestry, hunting, and fishing	57.0	2.0	33.5	3.2	23.9	21.5	2.4
Mining and quarrying	74.7	7.8	29.6	1.8	25.4	na	na
Manufacturing	72.4	6.3	69.6	10.3	26.1	26.0	0.1
Construction, repair, and demolition	66.4	4.0	41.0	1.9	24.9	u	u
Electricity, water, and sanitary services	67.0	6.9	56.6	11.8	26.5	u	u
Commerce	75.4	4.1	57.3	5.7	26.5	24.0	2.5
Transport, storage, and communication	61.9	4.2	69.3	9.9	24.3	23.4	0.9
Services	76.3	3.2	71.7	11.2	26.1	26.1	0.1
WORK STATUS							
Employer	43.9	1.3	(44.7)[a]	6.1	24.0	u	u
Own-account worker	28.1	0.7	52.5	8.6	20.9	22.4	-1.5
Government employee	76.2	4.1	75.0	14.9	26.1	24.2	1.9
Private employee	70.6	7.5	69.0	8.0	26.0	25.7	0.3
Unpaid family worker	80.0	25.8	54.9	4.7	25.8	23.8	2.0
RELIGION							
Buddhism	63.4	2.9	38.4	4.0	24.7	22.0	2.7
Islam	52.2	1.8	25.9	0.8	23.3	19.6	3.7
Christianity	60.6	2.6	50.8	12.9	24.9	21.7	3.2
EDUCATIONAL ATTAINMENT BY RELIGION							
No schooling							
Buddhism	60.6	5.9	29.2	4.2	25.1	20.6	4.5
Islam	37.6	2.0	7.5	0.3	21.9	17.0	4.9
Christianity	45.9	1.0	31.3	5.9	23.6	18.7	4.9

TABLE 10 *(continued)*

Characteristics	Percentage never married				Singulate mean age at first marriage		
	Male		Female				
	20–24	40–44	20–24	40–44	Male	Female	M–F
Primary							
Buddhism	60.6	2.2	35.3	3.5	24.3	21.7	2.6
Islam	55.1	1.3	32.6	1.8	23.6	20.0	3.6
Christianity	53.5	2.1	46.4	8.7	24.0	21.7	2.3
Secondary							
Buddhism	79.3	5.4	69.6	11.3	26.7	25.7	1.0
Islam	88.0	7.3	65.6	5.9	26.6	u	u
Christianity	82.0	3.1	80.5	5.0	u	17.6	u
University							
Buddhism	97.8	3.5	95.4	28.9	29.6	30.0	−0.4
Islam	(93.9)[a]	u	(76.1)[a]	8.6	u	u	u
Christianity	(83.7)[a]	8.5	(84.1)[a]	62.9	26.6	21.6	5.0
Secondary and university							
Buddhism	81.2	5.0	74.1	15.0	27.1	26.5	0.6
Islam	88.5	6.3	66.6	7.0	27.0	28.7	−1.7
Christianity	82.1	5.9	81.3	34.4	27.5	20.1	7.4
CITIZENSHIP							
Thai	62.8	2.9	38.0	4.0	24.6	21.9	2.7
Chinese	79.2	3.3	77.6	1.2	26.2	24.9	1.3
EDUCATIONAL ATTAINMENT BY CITIZENSHIP							
No schooling and primary							
Thai	59.9	2.7	34.3	3.7	24.3	21.5	2.8
Chinese	77.5	3.2	(77.2)[a]	1.3	26.0	24.7	1.3
Secondary and university							
Thai	81.4	5.1	74.1	16.2	27.1	26.0	1.1
Chinese	(93.4)[a]	4.2	(79.8)[a]	u	28.6	25.8	2.8
RELATIONSHIP TO HEAD OF HOUSEHOLD							
Urban areas							
Head	38.0	2.1	67.2	11.1	21.7	26.7	−5.0
Son/daughter	90.1	31.3	85.5	46.2	28.7	28.9	−0.2
Relative and other	90.4	36.3	81.2	31.6	30.0	31.0	−1.0
Servant	89.1	48.3	91.3	26.5	30.8	31.6	−0.8

TABLE 10 *(continued)*

Characteristics	Percentage never married				Singulate mean age at first marriage		
	Male		Female				
	20–24	40–44	20–24	40–44	Male	Female	M−F
RELATIONSHIP TO HEAD OF HOUSEHOLD *(continued)*							
Rural areas							
Head	9.3	0.6	39.9	4.9	17.2	21.9	-4.7
Son/daughter	87.6	40.0	61.1	32.3	30.5	21.3	9.2
Relative and other	81.5	35.5	63.2	33.0	28.9	28.1	0.8
Servant	95.3	(0.0)[a]	84.0	(0.0)[a]	33.0	29.1	3.9
MIGRATION STATUS							
Lifetime migration							
Internal migrant	66.9	2.9	35.9	3.1	25.0	21.5	3.5
Internal nonmigrant	61.9	2.9	38.4	4.1	24.6	22.5	2.1
Migrant to Greater Bangkok	82.3	5.0	57.0	7.1	27.1	24.5	2.6
Born in Greater Bangkok	84.9	9.8	70.4	9.6	28.0	26.0	2.0
Five-year migration							
Internal migrant	53.5	3.7	26.6	3.2	23.7	20.2	3.5
Internal nonmigrant	65.4	2.8	40.2	4.0	24.9	22.2	2.7
Migrant to Greater Bangkok	82.2	7.9	54.1	7.5	27.0	24.3	2.7
Greater Bangkok resident	84.5	7.1	68.4	8.5	27.8	25.8	2.0

u—unavailable.

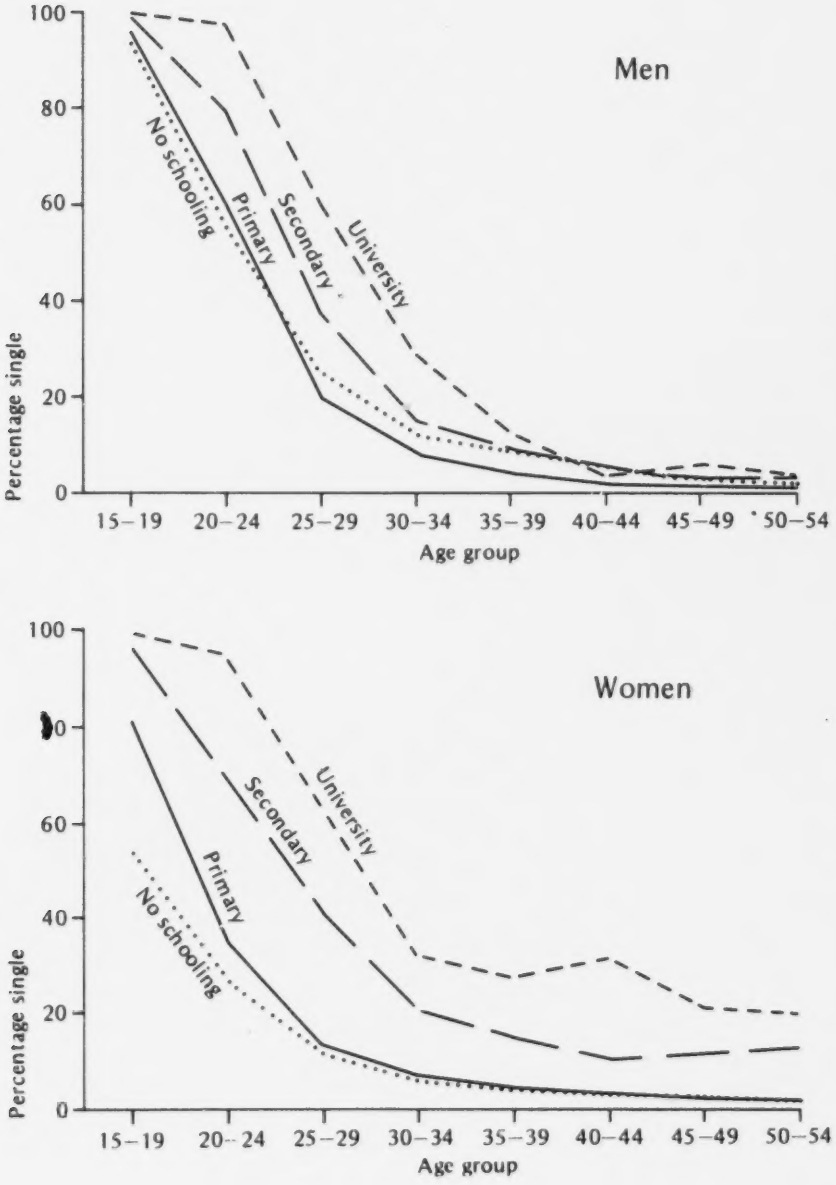
na—not applicable because women were not employed in these industries.

a Base population less than 500.

delay in marriage. As already noted, however, causality may run in the opposite direction, and women who do not marry early may enter or remain in the labor force. The findings presented here are therefore subject to more than one interpretation.

Table 10 reveals that age at first marriage was higher in 1970 for economically active Thai women than for women who did not participate in the labor force. The difference in singulate mean age at marriage was 3.3 years (24.3 and 21.0 respectively). However, it is noteworthy that for men the opposite was true and the difference was very pronounced (seven years). The proportion of women never married at

FIGURE 3 Percentage of men and women single by age, for four educational levels: Thailand, 1970



ages 20–24 was considerably higher among the economically active (60 percent) than among the economically inactive (35 percent). The relationship between labor force participation and delayed marriage is therefore confirmed for young women in Thailand. For men, again, the opposite was true, probably because the small minority of men who could not work despite social pressures to do so may have faced financial and physical constraints that led to marriage delay.

The 1970 Census also collected data on employment status and reasons for not working. Under the economically active category are three subgroups: the employed, those looking for work (consisting of experienced workers and new workers), and those waiting for the farm season. Among these three groups, those waiting for the farm season were characterized by the earliest mean ages at marriage (Table 10). Women engaged in farm activities, and especially those who had not taken a secondary job but were waiting for the farm season, had married relatively early.

Among the economically active, those looking for work were characterized by the highest proportion never married at ages 20–24. The data reveal further that new workers aged 20–24 looking for work had delayed marriage to the greatest extent. Experienced workers looking for work, on the other hand, had the lowest proportion never married among economically active men and women in that age group.

The substantial difference in marriage patterns between new and experienced workers looking for work may be associated with occupational level and other characteristics of the two groups. For example, persons looking for jobs for the first time (new workers) at ages 20–24 may have been in the higher educational and occupational groups whose work required specialized training and whose entrance into the labor force was consequently delayed. Experienced workers who were looking for work at ages 20–24 may have included persons who had moved to a new place and had to change jobs. Many of the moves could have been associated with marriage; the proportion never married was very low for these groups of men and women. Because these interrelations are rather speculative, detailed analysis of marriage patterns by occupation and migration status is pursued in succeeding sections.

As expected, among the economically inactive, students and persons (especially males) unable to work were least likely to be married. At ages 20–24, 94 and 99.5 percent respectively of male and female students were still single. Among those unable to work the percentages never married at ages 20–24 were as high as 100 for men and 90 for

women. The proportion never married at ages 40–44 was also relatively high (29 percent) for men unable to work. The singulate mean age at marriage for men and women unable to work was also high (33.7 and 29.8 respectively). These findings suggest that the effect of physical and mental disability in delaying marriage is substantial in Thailand. But more research on this topic is needed.

Housewives and female homemakers[3] had the lowest age at marriage (19.1) of the economically inactive group. The proportion of these women remaining single at ages 20–24 was also the lowest (20.5 percent), as one might expect. In contrast, for male homemakers age at marriage (29.1) and proportion still single at ages 20–24 (85.5 percent) were fairly high. This difference probably reflects the segregation of sex roles in Thai society. Young adult males are expected to have jobs before they marry, whereas young women are not necessarily expected to hold jobs.

Occupation, major industrial group, and work status

Occupation is another important variable in theoretical considerations as well as empirical investigations of the timing and prevalence of marriage. Employment in higher occupational strata, which usually requires prolonged training, may delay marriage. More importantly, occupation reflects social and economic status, which is closely associated with nuptiality behavior. Furthermore, certain occupations, although not regarded as conferring high status, may delay marriage because the type of work they entail makes early family building difficult.

Table 10 presents marriage data by occupation, major industrial group, and work status. In the occupational category, female agricultural workers and male agricultural and transport workers had the lowest SMAMs (21.5 and 23.9 respectively). Men in the clerical, administrative, and professional groups had the highest ages at marriage, around 27. Age at marriage for male workers in sales, service, and crafts were intermediate. For women, marriage age was highest among service workers and clerks (nearly 27). Women in administrative and professional occupations also married relatively late, around age 26. Women in crafts and labor, transport, and sales married at intermediate ages.

Thus average female age at marriage was about four to five years

3 Most female homemakers are, by definition, housewives. Others are family members who are still single and help around the house but are not counted as economically active persons.

higher for administrative, professional, and clerical workers than for agricultural workers, greater than the comparable differential in men's ages. The gap between male and female SMAMs was less than one year for occupational groups other than agriculture and sales.

In general, the proportions still single at ages 20–24 reveal a similar pattern of occupational differentials. Young women engaged in agricultural work were characterized by the lowest percentage never married (33.5) and young women in clerical occupations, the highest (82.5). Women whose jobs were related to transport had the second highest percentage never married (78.5), a finding that may reflect the nature of such work, which might discourage early family formulation for women. For men, in contrast, employment in transport did not appear to impede marriage. But nearly 90 percent of the 38,776 men who worked as miners and quarry workers in 1970 were still single at ages 20–24.

With regard to celibacy, which is roughly measured by percentages never married at ages 40–44, it is worth noting that women in the administrative, professional, and clerical occupations remained single in substantial proportions. For instance, 27 percent of women classified as administrative, executive, and managerial workers and government officials had never married. This finding is open to several interpretations. It may reflect a wide range of socioeconomic effects on nuptiality for high-status women. It probably is related to changes in sex roles and greater economic independence of such women owing in part to the stability and the prestige of their occupations. The unavailability of appropriate mates for this group of women may also be a contributing factor. Another possibility is that women who do not find mates early in their careers tend to seek higher-status jobs. Clarification of causality in this association requires more research.

The 1970 Census also provided information on marriage patterns of major industrial groups. Differences in SMAMs and proportions single were similar to those found in the comparison of occupational groups. Age at marriage was lowest for the primary sector, which includes agriculture, forestry, hunting, and fishing. Marriage ages for the secondary and tertiary sectors[4] were high, ranging from 23.4 for women in transport and related industries to 26.1 for those in services. For men, the highest age at marriage (26.5) occurred among those involved in electricity, water, and sanitary services and in commerce.

4 The secondary sector includes manufacturing, construction, repair, and demolition. The tertiary sector includes electricity, water, and sanitary services; commerce, transport, and storage; communication; and services.

Substantially larger proportions of women in services and transport-related industries remained single at ages 20–24 than in other industries. This probably points to a role conflict on the part of the women between marriage and work in the service and transport industries.

Classification of the labor force by work status reveals that self-employed (own-account) workers had a substantially lower average age at marriage among men (20.9) and a somewhat lower SMAM among women (22.4) than the categories of employer, government employee, private employee, and unpaid family worker. Government and private employees reported the highest ages at marriage (about 26 for men and 24–26 for women). Government employees aged 40–44 had the highest level of female celibacy (15 percent), nearly twice that of private employees, whereas unpaid family workers had the highest level of male celibacy (26 percent) in that age group. In general, work status may be closely related to occupation. Own-account workers tend to be employed in the agricultural sector or as small-scale vendors. Their traditional pattern of early and nearly universal marriage is therefore not surprising.

Religion

Because religion is an important social institution that is closely related to other traditions and customs, investigation of its association with the timing and prevalence of marriage, in a country where more than one religion is practiced, is of interest. In Thailand, Buddhism is the religion of 95.3 percent of the population. The census is an ideal source of information on religious orientation, for it contains a large enough number of minority cases to make comparison possible.

Interest in the influence of religion on nuptiality in Asia has led to both cross-national comparisons and studies of subgroups within specific countries (Smith, 1976). One important conclusion from these studies is that "religious differences cannot be readily dismissed as merely the reflection of differences in socioeconomic composition" (Smith, 1976:29).

Data from the 1970 Thai Census reveal certain nuptiality differences among the three major religions of Buddhism, Islam, and Christianity (the last of which includes Roman Catholicism and Protestantism). Among Moslems marriage occurred earlier and was more prevalent than among either Buddhists or Christians, whose nuptiality patterns were more or less similar (Table 10). Buddhists and Christians married on the average at ages 22 for women and 25 for men; Moslems, at about one and a half to two years earlier (20 for women and 23 for men).

The prevalence of marriage among Moslems can be seen in the proportions never married at ages 20–24, which were lowest in that religious group. Furthermore, marriage was almost universal for Moslem women, less than 1 percent of whom remained single at ages 40–44. Celibacy was fairly prevalent (nearly 13 percent) among Christian women but not so among Christian men or the other two religious groups. In general the association between religion and nuptiality seems to have been stronger for women than for men. This conclusion can be drawn from both the celibacy patterns and proportions single at younger ages. Marriage patterns differed across religions for women to a greater extent than for men.

Following the suggestion by Smith (1976) that the effect of religious orientation on marriage should be investigated independently of other socioeconomic influences, I have controlled the census data on religion for educational level. The results suggest that the effect of religion on nuptiality has operated, to some degree, independently of educational level, for at each educational level there were religious differentials in marriage behavior.

In general, age at marriage for Buddhists and Moslems increased substantially beyond the secondary level of education. The increase was especially pronounced for Moslem women, whose singulate mean age at marriage rose from 17 for those with no formal schooling to nearly 29 for those with secondary and university education combined. For Moslem men, SMAM also rose substantially with education, from 22 for those with no schooling to 27 for those in the secondary and university groups.

Among Christian women, however, SMAM remained in the range of 19 to 22 for different educational levels. For them religious orientation appears to have been an important influence on marriage almost regardless of educational level. But among Christian men SMAM rose moderately with education.

At the university level, celibacy among Buddhist and especially among Christian women was very high (29 and 63 percent respectively). The phenomenally high proportion of educated Christian women remaining single was probably related to other characteristics of Christians in Thailand. One of these is that Christians in Thailand are a minority. There were only 2,511 Christian women aged 15–55 in 1970 who had received university education. Consequently, if marriage between Christians and non-Christians is limited, a likely assumption, the high degree of celibacy among such women may have been the result of a severely restricted marriage market. In fact, there were

only 2,279 Christian men aged 15–55 with university education in 1970. Furthermore, a sizeable portion of the Christian women with university education were nuns who had taken an oath of celibacy.

Overall, the influence of religion on nuptiality seems to remain substantial. Yet its effect interacts with educational level. For low educational levels (no schooling and primary education), the Moslem pattern of nuptiality seems to be the most "traditional"—that is, age at marriage was lowest of all religious groups for both men and women, and the difference between male and female marriage ages was relatively high. For the higher educational levels (beyond primary education), religion seems to have had little effect on male age at marriage, which was about the same among the three religious groups. For women, on the other hand, SMAM among Christians was substantially lower than in the other two religions. This study, therefore, is able to show that the relationship between religious orientation and nuptiality in Thailand has not been negligible; but certain interactions of religion and education, as well as differences by sex, need to be considered in evaluating the nature of that relationship.

Citizenship

As of 1970, approximately 311,093 people holding Chinese citizenship resided in Thailand, accounting for 0.9 percent of the total population. (This figure does not include people of Chinese ancestry, who represented a much greater number. The 1970 Census focused only on current citizenship.) In urban areas, where the majority of Chinese citizens live, they constituted 4.3 percent of the population. Although the number of actual Chinese citizens is not great, persons of Chinese descent and Thai-Chinese mixtures form the major minority ethnic group in Thailand. Investivation of Thai-Chinese marriage patterns is therefore relevant to this study. Previous studies have shown that citizenship (Chinese and Thai) is one of the significant factors underlying marriage patterns in Thailand, in particular age at marriage, the mate selection process, and postnuptial residence (Limanonda, 1976).

Tabulation of proportions single by age and by citizenship can be obtained from the 1970 Census sample tape. The association between ethnicity and marriage behavior can therefore be investigated here. As shown in Table 10, both male and female Chinese married, on the average, at older ages than Thais. For men, SMAM was 24.6 for Thais and 26.2 for Chinese; corresponding figures for women were 21.9 and 24.9 respectively.

In order to confirm the effect of citizenship upon marriage age, I

have controlled the correlations between citizenship and nuptiality for educational attainment. Table 10 reveals that the influence of citizenship on marriage pattern interacted with educational level for women with limited education but not for men. For men age at marriage was higher among Chinese than among Thais at all educational levels. That Chinese men married later than Thais appears therefore to be related directly to ethnicity per se and probably is not a reflection of socioeconomic differences between the two ethnic groups. For women, the effect of citizenship was limited to those who attained at most a primary education; in that group SMAM was 21.5 for Thais and 24.7 for Chinese. Those who completed more than primary education, regardless of citizenship, married later, at 26.0 for Thais and 25.8 for Chinese. The effect of higher education on female marriage behavior therefore seems to have outweighed the difference in cultural background. In other words, for women, ethnicity and culture were associated in their influence on marriage behavior only when women had little education and probably were not yet going through the modernization process.

Relationship to household head

Marriage is the stage in life that is most closely related to change in household status. Postnuptial residence is one of the focal areas of interest concerning the Thai marriage pattern (Knodel and Prachuabmoh, 1973; Limanonda, 1976). The 1970 Census provides classification of marriage pattern by relationship to household head, son and daughter, relatives and others, and servants. Investigation of this tabulation may increase understanding of the association among marriage, stage of the life cycle, and consequent household status.

As for the proportion of men and women single at ages 20–24 and 40–44, those who retained the status of son or daughter of the household head remained single to a greater extent than the national average. In rural areas, for instance, the proportions of women who were single at ages 20–24 and 40–44 were 61 and 32 percent respectively for those classified as daughters (Table 10), as compared with only 34 and 3 percent respectively among all rural women (Table 4). Higher percentages single for women classified as daughters were also found in urban areas. The pattern for sons was similar. This finding reflects the selectivity of married persons who left the parents' home to settle in new households.

Table 10 shows further that a greater proportion of people classified as relatives and other persons residing in the household was single at

the two age groups than the national average. This suggests that married relatives were more likely than single individuals to leave the household, and also that, in the context of the extended family in Thailand, single individuals rather than married couples tended to coreside with the household head. This pattern emerged for both urban and rural places.

Data on servants indicate strongly that domestic servants, both males and females, tended to be single persons. The singulate mean age at marriage for this group was fairly high, ranging from 29.1 for women to 33.0 for men in rural areas. Delayed marriage among servants is historically common in other cultures. For example, quantitative evidence from nineteenth century Germany has indicated a similar pattern (Knodel and Maynes, 1976).

In Thailand, as in other developing countries and some of the developed nations in the past, many single young men and women in rural areas move to towns to work as servants. As a result, their age at marriage is typically higher than it would otherwise be. Although high proportions single among servants may be partly explained by the selectivity of those who marry and consequently give up working as servants, it is also possible that the nature of servants' work has something to do with celibacy or the delay of marriage. Knowing that domestic servants are inclined to quit their jobs when they marry, household heads tend not to encourage their marriage. Servants may also have difficulties in the mate selection process owing to limited opportunities for meeting potential partners, and they may have to postpone marriage because of their financial and residential constraints.

Migration status

Migration is related to marriage in a number of aspects. Men or women may move to marry and live with spouses who reside in another location. The move may be initiated soon after marriage when a couple is able to build a home or when they have children. On one hand, migration may free men and women from traditional constraints and facilitate mate selection. On the other, migration may disrupt a way of life and make marriage more difficult. Furthermore, migration associated with social mobility may result in late marriage because migrants may spend more time than nonmigrants attaining socioeconomic and occupational status before marriage.

Table 10 presents differentials in nuptiality by migration status for lifetime and five-year migrants and for migrants within Thailand and those to Greater Bangkok. It indicates that, except among male life-

time migrants, age at marriage was lower for migrants than for nonmigrants. This pattern is generally consistent whether one considers lifetime or recent migration and overall migration or rural-urban movement. The finding suggests that migration itself is associated with earlier family formation. Support for the social mobility thesis (described in preceding paragraph) is not evident here. For migration to Greater Bangkok, the differential in marriage age may be due to differences in rural-urban origin as well as to migrant or nonmigrant status. Although the causal link between migration and nuptiality cannot be identified for the time being, it is worth reemphasizing that the differential itself is consistent. Further analysis of this correlation is needed.

SOCIOECONOMIC AND DEMOGRAPHIC DIFFERENTIALS IN MARRIAGE DISSOLUTION

Various additional indexes of nuptiality have been calculated from the 1970 Census marital status information. The indexes include the proportion married (I_m), proportion single (I_s), proportion divorced (I_d), proportion separated (I_p), and proportion widowed (I_w). (See Coale, 1970, Hull and Saladi, 1977, and Smith, 1978, for calculation of these indexes.) These indexes indicate "distributions of women of reproductive age of various status [that] are weighted according to a Hutterite schedule of age specific fertility which is meant to represent an approximate weighting for potential fecundity patterns" (Hull and Saladi, 1977:3). In other words, these indexes reflect not only the marriage pattern of women but also the potential effect of their marital status on fertility. For instance, the proportion divorced will be inflated in the index I_d if divorced women are predominantly young (and presumably fecund).

This section emphasizes marriage dissolution and its potential effect on fertility. I will discuss the relation of I_d, I_p, and I_w to different socioeconomic groups, religions, citizenship, and selected demographic characteristics.

In 1970 approximately 65 percent ($I_m = 0.646$) of the reproductive potential of Thailand's population was realized through the existing marriage pattern, if (as I assume) illigitimacy was negligible (Table 11). About 30 percent ($I_s = 0.302$) of potential fertility was unrealized because of women of reproductive age who were still single. The remaining 5 percent of unrealized reproductive potential was due to marriage dissolution from divorce, separation, and widowhood. Among the three forms of marital dissolution, divorce and separation together had a greater effect on fertility than widowhood. The proportion of marital dissolution was lower in urban than in rural areas.

TABLE 11 Marital status indexes for Thai women, by region and by urban and rural areas: 1970

Region and area	Proportion married I_m	Proportion single I_s	Proportion divorced I_d	Proportion separated I_p	Proportion widowed I_w
WHOLE KINGDOM	0.646	0.302	0.011	0.020	0.021
Urban	0.523	0.452	0.009	0.001	0.015
Rural	0.669	0.278	0.011	0.019	0.022
GREATER BANGKOK	0.486	0.471	0.007	0.023	0.013
Urban	0.477	0.482	0.006	0.021	0.014
Rural	0.526	0.419	0.011	0.034	0.009
CENTRAL[a]	0.631	0.324	0.003	0.023	0.019
Urban	0.561	0.396	0.006	0.024	0.012
Rural	0.638	0.317	0.002	0.023	0.019
NORTH	0.669	0.278	0.012	0.017	0.023
Urban	0.553	0.394	0.015	0.019	0.018
Rural	0.677	0.270	0.012	0.017	0.024
NORTHEAST	0.671	0.270	0.018	0.018	0.022
Urban	0.569	0.373	0.023	0.019	0.017
Rural	0.675	0.266	0.018	0.018	0.023
SOUTH	0.699	0.251	0.007	0.019	0.025
Urban	0.566	0.385	0.010	0.019	0.020
Rural	0.716	0.233	0.007	0.019	0.025

a Excluding Greater Bangkok.

Lower educational and occupational groups were characterized by more marital disruption than other groups (Table 12). This was true for all three types of marriage dissolution. Socioeconomic differences in the proportion of women widowed could probably be partly explained by differences in mortality associated with socioeconomic status (see Knodel and Chamratrithirong, 1978). But lower proportions divorced and separated among the higher socioeconomic groups of women may have several explanations. First, women of higher socioeconomic status may have tended to conceal their marriage dissolution by reporting their marital status as being single or still married. Second, because age at marriage was lower among women of lower socioeco-

TABLE 12 Marital status indexes for Thai women, by selected socioeconomic, cultural, and demographic characteristics: 1970

Characteristic	Proportion married I_m	Proportion single I_s	Proportion divorced I_d	Proportion separated I_p	Proportion widowed I_w
EDUCATIONAL ATTAINMENT					
No schooling	0.770	0.148	0.016	0.021	0.044
Primary	0.646	0.305	0.011	0.020	0.018
Secondary	0.317	0.661	0.004	0.013	0.004
University	0.291	0.689	0.002	0.014	0.004
LITERACY					
Literate	0.622	0.332	0.010	0.019	0.017
Illiterate	0.775	0.142	0.017	0.021	0.044
ECONOMIC ACTIVITY					
Economically active	0.545	0.401	0.005	0.028	0.021
Employed	0.505	0.430	0.006	0.033	0.025
Looking for work	0.269	0.680	0.008	0.015	0.028
Experienced worker	0.523	0.341	0.005	0.032	0.099
New worker	0.206	0.764	0.008	0.011	0.011
Waiting for farm season	0.626	0.337	0.003	0.020	0.014
Economically inactive	0.678	0.295	0.003	0.018	0.007
Housewife/homemaker	0.814	0.156	0.002	0.020	0.008
Student	0.003	0.997	0.000	0.000	0.000
Unable to work	0.245	0.539	0.078	0.075	0.063
Other	0.207	0.740	0.007	0.045	0.001
OCCUPATION					
Professional, technical, and related workers	0.444	0.526	0.005	0.018	0.007
Administrative, executive, managerial workers, and government officials	0.482	0.473	0.006	0.016	0.023
Clerical and related workers	0.335	0.639	0.005	0.014	0.007
Sales workers	0.603	0.314	0.013	0.035	0.035

TABLE 12 *(continued)*

Characteristic	Proportion married I_m	Proportion single I_s	Proportion divorced I_d	Proportion separated I_p	Proportion widowed I_w
Agricultural workers	0.670	0.276	0.012	0.018	0.023
Miners and quarry workers	0.661	0.266	0.000	0.042	0.032
Transport workers	0.679	0.303	0.003	0.005	0.010
Artisans and laborers	0.448	0.476	0.012	0.037	0.026
Service workers	0.358	0.559	0.022	0.036	0.025
MAJOR INDUSTRY GROUP					
Agriculture, forestry, hunting, and fishing	0.622	0.257	0.011	0.017	0.021
Mining and quarrying	0.695	0.226	0.014	0.045	0.020
Manufacturing	0.408	0.530	0.010	0.029	0.024
Construction, repair, and demolition	0.544	0.371	0.014	0.049	0.021
Electricity, water, and sanitary services	0.552	0.426	0.006	0.012	0.005
Commerce	0.586	0.334	0.012	0.034	0.034
Transport, storage, and communication	0.594	0.367	0.006	0.017	0.015
Services	0.358	0.571	0.016	0.034	0.022
WORK STATUS					
Employer	0.508	0.238	0.013	0.072	0.169
Own-account worker	0.599	0.214	0.015	0.071	0.101
Government employee	0.491	0.480	0.003	0.019	0.007
Private employee	0.406	0.510	0.008	0.053	0.023
Unpaid family worker	0.597	0.382	0.002	0.013	0.006
RELIGION					
Buddhism	0.654	0.313	0.011	0.001	0.021
Islam	0.739	0.196	0.013	0.023	0.028
Christianity	0.585	0.372	0.010	0.008	0.025
EDUCATIONAL ATTAINMENT BY RELIGION					
No schooling					
Buddhism	0.762	0.155	0.015	0.023	0.045
Islam	0.856	0.065	0.019	0.019	0.041
Christianity	0.766	0.179	0.011	0.004	0.040

TABLE 12 *(continued)*

Characteristic	Proportion married l_m	Proportion single l_s	Proportion divorced l_d	Proportion separated l_p	Proportion widowed l_w
EDUCATIONAL ATTAINMENT BY RELIGION *(continued)*					
Primary					
Buddhism	0.646	0.306	0.011	0.020	0.017
Islam	0.650	0.298	0.008	0.027	0.016
Christianity	0.595	0.355	0.011	0.012	0.027
Secondary					
Buddhism	0.317	0.661	0.004	0.013	0.004
Islam	0.317	0.654	0.004	0.022	0.003
Christianity	0.309	0.681	0.002	0.004	0.004
University					
Buddhism	0.283	0.696	0.002	0.015	0.004
Islam	0.334	0.666	0.000	0.000	0.000
Christianity	0.447	0.539	0.000	0.008	0.006
Secondary and university					
Buddhism	0.312	0.666	0.004	0.014	0.004
Islam	0.319	0.655	0.003	0.021	0.002
Christianity	0.342	0.647	0.001	0.005	0.004
CITIZENSHIP					
Thai	0.645	0.303	0.011	0.020	0.021
Chinese	0.752	0.148	0.006	0.036	0.058
EDUCATIONAL ATTAINMENT BY CITIZENSHIP					
No schooling					
Thai	0.771	0.147	0.016	0.022	0.044
Chinese	0.836	0.055	0.005	0.023	0.081
Primary					
Thai	0.646	0.306	0.011	0.020	0.018
Chinese	0.599	0.317	0.009	0.061	0.014
Secondary					
Thai	0.315	0.663	0.004	0.013	0.004
Chinese	0.511	0.444	0.000	0.034	0.012
University					
Thai	0.282	0.697	0.002	0.014	0.004
Chinese	0.366	0.334	0.000	0.301	0.000

TABLE 12 *(continued)*

Characteristic	Proportion married l_m	Proportion single l_s	Proportion divorced l_d	Proportion separated l_p	Proportion widowed l_w
Secondary and university					
Thai	0.311	0.668	0.004	0.014	0.004
Chinese	0.500	0.436	0.000	0.053	0.011
RELATIONSHIP TO HEAD OF HOUSEHOLD					
Head	0.190	0.189	0.075	0.196	0.351
Daughter	0.319	0.622	0.018	0.026	0.015
Relative and other	0.211	0.698	0.021	0.034	0.036
Servant	0.063	0.849	0.020	0.048	0.020
MIGRATION STATUS					
Lifetime migration					
Internal migrant	0.694	0.259	0.009	0.019	0.019
Internal nonmigrant	0.638	0.310	0.011	0.020	0.021
Migrant to Greater Bangkok	0.551	0.403	0.007	0.025	0.015
Greater Bangkok resident	0.434	0.525	0.007	0.021	0.011
Five-year migration					
Internal migrant	0.709	0.247	0.010	0.017	0.016
Internal nonmigrant	0.637	0.310	0.011	0.020	0.022
Migrant to Greater Bangkok	0.485	0.473	0.006	0.025	0.011
Greater Bangkok resident	0.486	0.471	0.007	0.023	0.013

nomic status, such women were exposed to a longer period of risk of divorce and separation. Third, there is a possibility that women of higher socioeconomic status may tend to remarry more than their lower socioeconomic counterparts. Fourth, marriage stability may be related to financial stability. Finally, the traditional pattern of early marriage and probably quasi-arranged marriage among the lower social and economic classes may lead to less stable marriages than the modern pattern of later marriage, in which mate selection is probably more carefully processed by both spouses and their parents. Unfortunately,

verification of these hypotheses is not possible without additional data.

Besides the comparison of marital indexes by socioeconomic variables, census data permit differentiation by religion. In general, Moslem women seemed to experience the greatest incidence of separation and divorce, although differences between them and Buddhist and Christian women were not great (Table 12). For those with no education, Moslem and Buddhist women were similar to each other in the extent of separation and divorce combined. For those at primary and secondary educational levels, however, Moslem women had a greater incidence of separation than Buddhist and Christian women. Yet at the university level there was no evidence of Moslem marriage dissolution at all. In general Christian women were less likely to be separated or divorced than the two other religious groups.

As for citizenship, the census data reveal that separation was more common among Chinese, but divorce was more common among Thais. Whereas separation declined with higher educational levels for Thais, the opposite was true for Chinese; for them, the proportion separated rose from 2 percent among those with no formal schooling to 30 percent among those with university education. Divorce was almost negligible for Thais at the higher educational levels, and virtually disappeared for Chinese educated beyond primary level. At the university level, however, separation increased sharply among Chinese. Possibly there was a tendency for more highly educated Chinese to choose separation rather than divorce, or perhaps they tended to describe their divorced status as separation.

The census data reveal differences in marriage behavior for various household statuses of women. Only 9 percent of households were headed by women. Most of these women were widows ($I_W = 0.351$); the proportions separated or divorced were also high ($I_p = 0.196$ and $I_d = 0.075$). The proportion of female household heads who were currently married or single was much lower than the national average for women of all household statuses (Table 11). In sum, the fertility potential of female heads of household was reduced by more than half through divorce, separation, or death of husbands.

Women who were daughters of household heads remained predominantly single. The proportion of such single women was far above the national average ($I_S = 0.622$). Marriage dissolution by separation and divorce among daughters of household heads was slightly higher than the figures for all Thai women (shown in Table 11). This finding may reflect their return to the parents' home after marital dissolution. As

expected from the data presented in Table 10, the marriage pattern of relatives and other persons residing in the household was anomalous. Almost 70 percent of such women were single, and the proportion whose marriages had ended in divorce, separation, or widowhood was higher than the national average. The nuptiality pattern of servants was least typical of the national pattern. About 85 percent were single, and the proportion married was very low. The incidence of separation in this group was higher than the national average, nearly 5 percent compared with 2 percent.

Female migrants may have a higher proportion of broken families than female nonmigrants. Goldstein et al. (1973), investigating temporary separation, speculated that the high proportion of women without a spouse present in Greater Bangkok may have been the result of migration. The current analysis is concerned with the association between migration status and marriage patterns including permanent dissolution. The 1970 Census data reveal no substantial difference in the extent of marriage dissolution between female migrants and female nonmigrants. This finding pertains to both lifetime and five-year migration and to migration throughout Thailand as well as migration to Greater Bangkok. In contrast, data on males (shown in Table 13) reveal that in most age groups separation was more prevalent among five-year migrants than among nonmigrants.

In general, separation and migration appear to be closely related among Thai males. A man who migrates without his wife may end up separated. Conversely, separation may lead to migration away from the wife. The association between separation and migration may be exaggerated, however, by the tendency of Thai men to use the word "separation" to describe their status of living apart from their wives when they migrate. It is noteworthy that separation and migration are closely associated only for men and not for women, suggesting a pattern of husbands leaving wives rather than vice versa. Data on divorce, in contrast, do not show any consistent association with migration, for either men or women.

THE RELATIONSHIP OF MARITAL STABILITY TO FERTILITY

Nuptiality patterns are known to be important in affecting fertility. Not only are the timing and tempo of first marriage among the significant intermediate variables determining the time span of the reproductive process, but so also are the extent of broken marriages from widowhood, divorce, and separation (Davis and Blake, 1956). Goldstein et al. (1973), in their analysis of a 1 percent sample from the

TABLE 13 Percentage of men widowed, divorced, and separated, by five-year migration status and age: internal migration and migration to Greater Bangkok, 1970

Migration status and age	Widowed	Divorced	Separated
INTERNAL MIGRATION			
Migrants			
15–19	0.05	0.01	0.01
20–24	0.17	0.06	0.53
25–29	0.31	0.37	1.26
30–34	0.23	0.51	2.07
35–39	1.27	0.81	2.78
40–44	1.79	1.24	2.30
45–49	2.92	1.06	4.09
50–54	6.21	0.75	3.66
Total	0.74	0.40	1.42
Nonmigrants			
15–19	0.02	0.06	0.05
20–24	0.20	0.27	0.46
25–29	0.63	0.56	0.63
30–34	0.60	0.48	0.60
35–39	1.29	0.40	0.73
40–44	1.65	0.50	0.89
45–49	2.93	0.30	0.88
50–54	4.73	0.36	0.36
Total	1.05	0.33	0.57
MIGRATION TO GREATER BANGKOK			
Migrants			
15–19	0.00	0.00	0.00
20–24	0.00	0.04	0.21
25–29	0.04	0.08	1.46
30–34	0.12	0.23	4.22
35–39	0.64	0.55	2.57
40–44	1.02	0.29	1.60
45–49	0.90	0.22	2.92
50–54	2.22	0.49	3.95
Total	0.21	0.13	1.27

TABLE 13 *(continued)*

Migration status and age	Widowed	Divorced	Separated
Nonmigrants			
15–19	0.01	0.01	0.04
20–24	0.02	0.02	0.21
25–29	0.37	0.60	1.34
30–34	0.50	0.34	1.12
35–39	0.67	0.31	1.49
40–44	0.67	0.45	1.77
45–49	1.20	0.75	1.67
50–54	2.92	0.63	2.42
Total	0.52	0.30	0.98

1960 Census of Thailand, found that the cumulative fertility of married women with spouse present far exceeded that of women whose marriages had been disrupted by divorce or temporary absence of spouse. Similar findings were reported by Knodel and Prachuabmoh (1973:28) from the Longitudinal Study of Social, Economic, and Demographic Change in Thailand. Currently married women were found to have the highest cumulative fertility; divorced and separated women, the lowest; and widows, intermediate fertility. Fertility differentials by marital status were found to be more pronounced in rural areas, a finding probably related to rural-urban differentials in the adoption of contraception. According to Knodel and Prachuabmoh (1973:28), "differences in the length of exposure to the risk of childbearing beyond the point where the desired family size is achieved may be less consequential for the cumulative fertility of urban women" than for their rural counterparts.

An attempt is made here to examine the effects of marital status on cumulative and current fertility of ever married women in Thailand. Tables 14 and 15 present number of children ever born alive (cumulative fertility) and own children in the age group 0–4 in 1970 (current fertility[5]) per 1,000 ever married women by age and marital status. For the children-ever-born data, fertility was found to differ markedly by marital status. The fertility of currently married women

5 The number of women's own children aged 0–4 is called the "current" fertility of those women because it refers to the number of surviving children who were born during the five years preceding the census.

TABLE 14 Number of children ever born alive (cumulative fertility) per 1,000 ever married women, by women's age and current marital status: 1970

Age group	Children ever born per 1,000 women				
	Ever married	Currently married	Widowed	Divorced	Separated
15–19	731.3	731.3	700.0	832.5	677.5
20–24	1,842.5	1,875.7	1,441.9	1,380.1	1,350.4
25–29	3,093.1	3,146.7	2,660.6	1,730.9	2,207.5
30–34	4,389.8	4,479.5	3,532.9	2,371.8	2,913.5
35–39	5,628.0	5,780.2	4,434.8	2,759.3	3,609.1
40–44	6,447.6	6,659.2	5,291.8	3,388.0	4,470.9
45–49	6,587.0	6,843.5	5,797.9	3,253.9	4,781.1
Total	4,287.5	4,343.2	4,706.2	2,199.0	2,904.4
Total standardized[a]	4,243.8	4,357.4	3,498.6	2,299.2	2,925.9

a Standardization is based on the following numbers of ever married women per age group (in thousands): 15–19, 355.4; 20–24, 841.5; 25–29, 965.9; 30–34, 993.4; 35–39, 909.5; 40–44, 735.2; 45–49, 578.8; and all age groups, 5,379.7.

TABLE 15 Number of own children aged 0–4 (current fertility) per 1,000 ever married women, by women's age and current marital status: 1970

Age group	Own children aged 0–4 per 1,000 women				
	Ever married	Currently married	Widowed	Divorced	Separated
15–19	594.7	958.6	465.1	621.9	502.9
20–24	1,260.3	1,286.0	936.4	868.0	892.8
25–29	1,453.3	1,494.9	872.7	673.5	859.6
30–34	1,280.5	1,329.9	652.3	416.6	571.2
35–39	1,060.7	1,120.1	461.4	245.0	411.4
40–44	692.5	754.3	276.4	100.7	252.3
45–49	230.7	266.6	69.1	79.8	84.6
Total	1,032.8	1,090.4	355.8	476.1	548.3
Total standardized[a]	1,032.6	1,075.8	577.6	438.5	545.8

a See footnote a, Table 14, for basis of standardization.

of reproductive age (15–49) was much higher than that of women whose marriages were disrupted by widowhood, divorce, or separation. This pattern is similar for all age groups. The age-standardized figures show that women who were currently married had borne an average of 4.4 children, whereas widowed, divorced, and separated women had borne an average of 3.5, 2.3, and 2.9 children respectively.[6] At the end of the reproductive period, women whose marriages were currently stable had an average completed family size of 6.8 children, as compared with 5.8, 3.3, and 4.8 children respectively for the three groups of women whose marriages were broken.

The effect of marital status on both cumulative and current fertility appears to have been quite substantial here. To ascertain whether the fertility differences were due to marital instability and not to other socioeconomic factors, it is necessary to control fertility for the possible effects of such factors. Table 16 shows cumulative and current fertility controlled for the educational attainment of women. At every educational level, cumulative and current fertility was higher among women who were currently married than among women who were widowed, divorced, or separated. This was true for all age groups, as shown in Tables 17 and 18. Among women whose marriages were disrupted, cumulative fertility was highest for widows and lowest for the divorced, at all educational levels (Table 16) and for most of all age groups (Table 17). The explanation for this general pattern is probably related to the amount of time women were exposed to the risk of childbearing. There is no consistent pattern, however, in the current fertility (i.e., fertility within the past five years) of women with disrupted marriages when one takes educational attainment into consideration. Current fertility was therefore not totally influenced by the length of exposure to childbearing risk.

For both cumulative and current fertility, the differentials by marital status were more pronounced among women with lower education. This finding may be related to one from the study of Knodel and Prachuabmoh (1973), who reported a more pronounced differentiation in rural than in the urban areas. Their speculation concerning differences in contraceptive practice among rural and urban women is

6 The total unstandardized figures show higher fertility among widows than among currently married. This finding is due to a great majority of widows being in the older age groups; their cumulative fertility was higher than that of currently married women simply because of their longer exposure to childbearing. Interpretation of the figures for all age groups should therefore be made after age standardization.

TABLE 16 Number of children ever born alive (cumulative fertility) and own children aged 0–4 (current fertility), per 1,000 ever married women aged 15–49, by educational attainment, standardized age, and current marital status

Type of fertility and educational attainment	Number of children per 1,000 women				
	Ever married	Currently married	Widowed	Divorced	Separated
CHILDREN EVER BORN					
All educational levels[a]	4,243.8	4,357.4	3,498.6	2,299.2	2,925.9
No schooling	4,436.1	4,571.3	3,499.9	2,475.1	3,252.0
Primary	4,249.8	4,356.5	3,538.7	2,201.3	2,822.5
Secondary and university	2,873.1	2,815.4	2,505.7	1,835.4	2,108.9
OWN CHILDREN AGED 0–4					
All educational levels[a]	1,032.6	1,075.8	577.6	438.5	545.8
No schooling	1,007.6	1,057.6	470.7	449.7	584.1
Primary	1,060.0	1,101.9	621.5	432.1	552.1
Secondary and university	694.7	717.0	414.8	265.0	443.7

NOTE: See footnote a, Table 14, for basis of age standardization.

a Women whose educational level is unknown are included in the calculation.

probably applicable to the current finding regarding educational differences.

Regardless of marital status, both cumulative and current fertility were markedly lower among women who had attained secondary and higher levels of education than among those with lower educational attainment (Table 16).[7] Both education and marital disruption, therefore, appear to have had a substantial negative influence on fertility. The interaction between them, however, is not investigated here.

Overall, the results from the current analysis support previous findings, discussed at the beginning of the paper. They help to confirm the hypothesis that marriage dissolution affects fertility in Thailand to a large extent. In the section on SES and demographic differentials in marital dissolution I showed that socioeconomic characteristics were strongly related to the degree of marital stability. Marriage

7 Analysis of socioeconomic differentials (including education) in fertility from a 2 percent sample of the 1970 Population and Housing Census of Thailand is presented in Chamratrithirong and Boonpratuang (1978).

TABLE 17 Number of children ever born alive (cumulative fertility) per 1,000 ever married women, by women's educational attainment, age, and current marital status: 1970

Educational attainment and age group	Children ever born per 1,000 women				
	Ever married	Currently married	Widowed	Divorced	Separated
NO SCHOOLING					
15–19	939.4	955.9	551.0	799.9	761.9
20–24	2,128.3	2,189.7	1,361.7	1,423.5	1,655.6
25–29	3,409.5	3,473.2	2,947.8	1,517.6	2,612.8
30–34	4,626.7	4,714.6	3,636.5	3,103.0	3,193.3
35–39	5,713.2	5,918.2	4,167.2	2,453.9	3,715.3
40–44	6,547.2	6,771.5	5,300.6	4,191.2	5,340.7
45–49	6,636.6	6,929.3	5,770.2	3,409.2	4,888.7
Total	5,217.9	5,316.5	5,056.2	2,718.7	3,925.1
Total standardized[a]	4,436.1	4,571.3	3,499.9	2,475.1	3,252.0
PRIMARY					
15–19	694.9	692.4	745.2	834.9	669.5
20–24	1,821.8	1,851.9	1,452.5	1,392.2	1,323.4
25–29	3,091.5	3,146.9	2,579.8	1,791.6	2,168.1
30–34	4,382.4	4,475.3	3,519.9	2,098.6	2,901.5
35–39	5,666.7	5,804.7	4,602.6	2,891.6	3,612.1
40–44	6,477.1	6,685.5	5,341.6	2,954.7	3,961.8
45–49	6,612.1	6,828.3	5,957.4	3,035.2	4,592.4
Total	4,026.1	4,084.7	4,461.2	2,002.7	2,612.1
Total standardized[a]	4,249.8	4,356.5	3,538.7	2,201.3	2,822.5
SECONDARY AND UNIVERSITY					
15–19	710.8	717.8	2,464.3	1,217.4	227.0
20–24	1,409.2	1,440.8	1,976.5	1,068.1	937.2
25–29	1,973.0	1,985.8	2,054.1	1,404.4	1,693.2
30–34	3,406.4	2,768.3	1,831.3	2,098.7	1,776.2
35–39	3,344.2	3,420.1	2,696.8	2,333.3	2,401.3
40–44	4,122.2	4,279.8	3,512.9	2,123.2	3,066.1
45–49	4,589.3	4,756.4	3,631.7	2,450.2	4,557.0
Total	2,525.5	2,551.4	3,038.8	1,797.1	1,909.9
Total standardized[a]	2,873.1	2,815.4	2,505.7	1,835.4	2,108.9

a See footnote a, Table 14, for basis of standardization.

TABLE 18 Number of own children aged 0–4 (current fertility) per 1,000 ever married women, by women's educational attainment, age, and current marital status: 1970

Educational attainment and age group	Own children aged 0–4 per 1,000 women				
	Ever married	Currently married	Widowed	Divorced	Separated
NO SCHOOLING					
15–19	706.9	726.0	347.3	474.9	581.6
20–24	1,260.0	1,302.2	508.0	797.9	1,069.0
25–29	1,378.4	1,425.1	836.9	535.7	820.9
30–34	1,256.3	1,298.5	603.4	617.4	761.4
35–39	1,034.0	1,113.1	351.6	323.2	300.7
40–44	636.4	699.8	292.6	130.8	246.3
45–49	209.6	245.7	66.7	100.5	55.5
Total	837.0	912.9	236.5	392.4	411.7
Total standardized[a]	1,007.6	1,057.6	470.7	449.7	584.1
PRIMARY					
15–19	577.4	579.4	520.9	655.5	491.4
20–24	1,272.8	1,295.8	1,059.5	900.5	880.4
25–29	1,492.6	1,534.9	889.5	721.1	876.8
30–34	1,302.4	1,354.3	678.4	347.1	546.0
35–39	1,090.0	1,143.7	530.6	224.4	448.2
40–44	745.7	805.8	281.7	83.9	262.6
45–49	261.3	295.9	75.6	46.1	112.1
Total	1,112.6	1,161.5	463.7	517.1	595.9
Total standardized[a]	1,060.0	1,101.9	621.5	432.1	552.1
SECONDARY AND UNIVERSITY					
15–19	501.0	513.6	392.9	478.3	227.0
20–24	1,014.0	1,043.3	1,129.4	599.6	609.0
25–29	1,101.8	1,121.6	593.1	357.7	733.3
30–34	939.9	968.1	478.8	218.0	540.7
35–39	493.1	508.8	33.4	85.0	473.8
40–44	228.8	251.8	52.1	77.5	128.2
45–49	158.2	179.6	41.8	94.4	39.7
Total	813.2	847.6	187.8	276.9	502.9
Total standardized[a]	694.7	717.0	414.8	265.0	443.7

a See footnote a, Table 14, for basis of standardization.

dissolution among lower-status women was probably crucial in reducing their fertility. Marriage disruption among higher-status women, on the other hand, may have had less effect on their fertility because their reproductive behavior was influenced to a greater degree by socioeconomic development and family planning practice. To gain a fuller understanding of the process of fertility decline during the course of modernization in Thailand, it will be necessary to investigate not only the role of marriage and marital dissolution, but also the extent of remarriage and the interrelation between marriage and contraceptive practice.

SUMMARY AND CONCLUSION

In 1970 nuptiality patterns in Thailand lay between the "traditional" (i.e., young age at marriage and universal marriage) and the "modern" or "European" type characterized by marriage postponement and a relatively high proportion of celibacy. Singulate mean ages at marriage (SMAMs) of 25 for males and 22 for females, revealed by the 1970 Census, are considered "intermediate." Only 2 to 3 percent of the population remained single at age 50, indicating a nearly universal marriage pattern. Comparison of the proportions of men and women single at younger ages in 1960 and 1970 has shown a slight increase in age at marriage for both sexes. Delayed marriage was especially noticeable in Greater Bangkok and the Central Region. Data from the 1975 Survey of Fertility in Thailand (SOFT) indicate an increase in percentages single for both men and women, and point to an accelerated increase in the proportion of young single women during 1970–75. But the 1975 Survey of Population Change produced opposite results. The analysis here, which tends to support SOFT data, suggests that Thai nuptiality is in transition toward a more modern marriage pattern, particularly in the more developed areas of the country.

Cross-sectional analysis of 1970 Census data suggests that socioeconomic change affected nuptiality in Thailand during the last decade. Age at marriage varied greatly across the rural-urban areas and the four regions of Thailand. Greater Bangkok had the highest ages at marriage. In a cross-provincial analysis of the relationship between nuptiality and socioeconomic characteristics, age at marriage and percentage single were positively related, especially for men.

Availability of mates was also found to affect nuptiality patterns, particularly for women. The masculinity ratio was negatively and significantly correlated with spinsterhood and female age at marriage. This relationship still held when socioeconomic status was controlled.

For males, however, the relationship was weak and virtually disappeared when SES was controlled. These findings point to differential sex roles in traditional Thai society. Women are more passive in mate selection and depend on male initiatives. In contrast, the marriage behavior of men was found to be much more closely related to socioeconomic factors and not to depend strongly on the sheer number of mates available.

With data from the 2 percent sample of the 1970 Census, this study was able to consider socioeconomic and demographic differentials in marriage patterns. The association of education, labor force participation, and occupation with delay in age at marriage were found to be substantial. Differences in marriage behavior by religion and citizenship were evident even after educational level was controlled. Selected demographic characteristics, household status, and migration status were also found to have a close association with nuptiality.

Using Coale's and Hull and Saladi's indexes, I examined the relation between marital dissolution and fertility. Marriage dissolution was found to be less prevalent in urban than in rural areas and inversely related to educational and occupational status. The difference between urban and rural areas in the prevalence of widowhood was probably due in part to mortality differentials related to socioeconomic status. The urban-rural difference in the extent of divorce and separation could be due to several factors. Divorce and separation were somewhat more common among Moslem than among Buddhist and Christian women. Chinese citizens had a higher separation rate, but a lower divorce rate, than Thais. Women classified as household heads had a greater tendency to have broken marriages, especially through widowhood, than other women. The data implied a positive association between marriage disruption and the migration of men, but not of women.

Marital stability proved to be strongly related to fertility outcome. Cumulative fertility, as measured by number of children ever born, was lowest among divorced women, followed by separated and widowed women respectively. Currently married women were characterized by the highest fertility. Data on current fertility, as measured by the number of own children born within the five years preceding the 1970 Census, showed a similar pattern. For cumulative fertility, the pattern was consistent in all educational groups, though differentials were more pronounced in the lower educational strata, perhaps reflecting greater contraceptive practice among more highly educated women.

This study has shown that in Thailand socioeconomic development, marriage age and proportions married, marriage dissolution, and fertility are closely related to each other. It appears that in the course of national development marriage has been delayed and the stability of marriage increased. But marriage disruption through divorce, separation, and widowhood is still an important influence on fertility in Thailand. The strong association between nuptiality and level of national development suggests that government policy fostering improved status for women could be more effective in delaying their marriage than legal measures to prohibit early marriage. Such a policy would be beneficial not only in furthering the objective of fertility reduction but in promoting the stability of marital life of women as well. Lastly, from a demographic viewpoint, it will be interesting to see whether linkages between national development and marriage and between marriage and fertility weaken as contraceptive use becomes widespread in Thailand, as seems to have happened in many developed countries.

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